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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,762	10/22/2003	Nitzan Peleg	200308558-1	5363

22879 7590 04/27/2006

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EXAMINER

TIMBLIN, ROBERT M

ART UNIT	PAPER NUMBER
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2167

DATE MAILED: 04/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/690,762	PELEG ET AL.	
	Examiner	Art Unit	
	Robert M. Timblin	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is responsive to application 10/690,762 filed 10/22/2003.

Claims 1-30 have been examined and are pending prosecution.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: Server 40 from page 6, paragraph 0017.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-30 are rejected under 35 U.S.C. 102(b) as being anticipated by **Sun et al.** (Sun hereinafter) (U.S. 5,963,959).

With respect to claims 1, 5, 10, 19, 24, 28, **Sun** discloses A system that allows a table and a materialized view to be available while the materialized view is being refreshed, the system comprising:

‘a materialized view that is derived at least in part from a table’ as a snapshot that references a master table (col. 2, lines 24-27).

‘a refresh log that contains a plurality of entries, each of the plurality of entries corresponding to a change in the table as a snapshot log with a modification indication (col. 2 lines 35-45 and figures 7a-7e).

‘each of the plurality of entries comprising an epoch identifier’ as a refresh/modification timestamp (col. 2 lines 45-52 and figures 7a-7e). From the cited figures, a timestamp for each entry can be seen.

a refresh manager that performs a refresh operation on the materialized view in multiple steps by

‘(a) successively reading a first subset of the plurality of entries indicated by a specific epoch identifier from the refresh log’ as deriving a snapshot from a master table (col. 5, lines 33-45 and fig. 3).

‘(b) identifying a second subset of the plurality of entries from within the first subset of the plurality of entries, the second subset of the plurality of entries falling within a primary key value boundary’ as selecting primary key values PK1=: and ... PKn=:n (col. 5, lines 46-62).

‘(c) applying the second subset of the plurality of entries to the materialized view’ as applying the appropriate refreshed rows to the snapshot table (col. 1, lines 35-40, and col. 5, lines 63-67).

With respect to claims 2, 7, 11, 20, 25, and 29, **Sun** discloses **‘the corresponding epoch identifiers represent epoch numbers that have been created since a previous refresh operation on the materialized view’** as a modification timestamp (col. 2 lines 45-50 and figures 7a-7e).

With respect to claims 3, 6, 12, and 17, **Sun** discloses **‘the second subset of the plurality of entries is applied to the materialized view in a primary key order’** as differences between snapshot and master table are reconciled based on primary key values (col. 2 lines 45-56).

With respect to claims 4, 8, 15, 22, 26, 30, **Sun** discloses **'the refresh manager is adapted to distinguish between entries of the second subset of the plurality of entries that have already been applied to the materialized view in previous transactions and entries of the second subset of the plurality of entries that have not been applied to the materialized view in the event of a failure of the refresh operation'** as updateable snapshot log 710 has an old/new column, OLD\$\$, which indicates whether a primary key value for the row is old ('O'), new ('N'), or unchanged (col. 8, lines 52-64).

With respect to claims 9, 16, 23, and 27, **Sun** discloses A system that provides availability of a table and a materialized view while the materialized view is being refreshed, the table being derived at least in part from the materialized view, the system comprising:

a refresh log that contains a plurality of entries' as a master log (col. 1, lines 30-37 and col. 2 lines 45-55).

'a refresh manager that computes a table delta based on the refresh log and applies the table delta to the materialized view' as in response to the refresh command, a refresh timestamp is generating and modification timestamps are reset (col. 2, lines 45-54).

With respect to claims 13 and 18, **Sun** discloses **'the table delta is used to refresh the materialized view in multiple transactions'** as refresh timestamp is generated and modification timestamps are reset.

With respect to claims 14 and 21, **Sun** discloses **'recording the primary key value for each entry from the update log after that entry is applied to the materialized view'** as recording the primary key in a master log (col. 2. lines 30-33).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent 6,125,360 issued to **Witkowski et al.** The subject matter disclosed therein is pertinent to that of claims 1-30 (i.e. epoch identifier and table delta).

US Patent 6,546,402 issued to **Beyer et al.** The subject matter disclosed therein is pertinent to that of claims 1-30 (i.e. view maintenance).

US Patent 6,708,179 issued to **Arora**. The subject matter disclosed therein is pertinent to that of claims 1-30 (i.e. calculating table delta).

US Patent 6,697,804 issued to **Elsbernd et al.** The subject matter disclosed therein is pertinent to that of claims 1-30 (i.e. primary key subsets).

Art Unit: 2167

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert M. Timblin whose telephone number is 571-272-5627. The examiner can normally be reached on M-F 8:00-4:30.

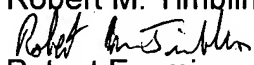
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Breene can be reached on 571-272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Leslie Wong

Primary Examiner

RMT
4/10/2006

Robert M. Timblin

Patent Examiner AU 2167